PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
(beaven01.001)

Applicant:	Douglas F. Beaven	Paper No.:	
Application No:	09/312,740	Group Art Unit: 3623	
Filed:	5/14/99	Examiner: Heck, Michael	

Title: *Processing management information*

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Assistant Commissioner for Patents
Washington, DC 20231

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Submission with an RCE under 37 C.F.R. 1.114 **GROUP 3600**

Summary of the prosecution

On 12/30/02, Examiner mailed a first Office action in the above application in which he required a new Declaration, required correction of the Drawing as specified in the *Notice of Draftperson's patent drawing review,* PTO-948, objected to the Drawing as having two identical figures, and required correction of the drawing; objected to the Specification; and objected to various informalities in claims 11, 12, 13, 14, 26, 27, 28, and 43. Examiner further rejected claims 2-23, 39-62, 64-94, and 96-125 for indefiniteness under 35 U.S.C. 112, second paragraph, rejected claims 1, 24, 28, 29, 31, 34, 35-37, 38, 63, and 95 under 35 U.S.C. 103(a) as obvious over Lowery, *Managing projects with Microsoft Project 4.0 for Windows and Macintosh,* version 4.0, Van Nostrand Reinhold, 1994 (henceforth "Lowery"), rejected claims 25, 33, and 36 under 35 U.S.C. 103(a) as being unpatentable over Lowery combined with *ManagePro 2.0 for Windows, version 2.0, Reference Manual,* Avantos Performance Systems, Inc., 1993 (henceforth "Managepro"), and rejected claims 26, 27, 30, and 32 under 35 U.S.C. 103(a) as obvious over Lowery in combination with published U.S. patent application 2001/0027455, Abulleil et al., having an effective filing date of 8/21/98 (henceforth "Abulleil"). Applicant amended his Specification, Drawing, and claims to overcome the objections thereto and traversed the rejections of the claims under 35 U.S.C. 112, second paragraph and 35 U.S.C. 103(a) in a response filed on 4/28/03 with a one-month extension of time.

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Applicant received a second non-final Office action in the above application mailed 7/16/03. In the second Office action, Examiner indicated that Applicant's traversal of the rejections had been persuasive. Examiner objected to the Specification and Drawing on

5   the basis of further errors and objected to claims 14, 19, 85, 86, and 122 because of informalities. In his new grounds of rejection, Examiner rejected claims independent claims 1, 38, 63, and 95 as lacking patentable utility and as being addressed to non-patentable subject matter. The dependent claims were rejected as being dependent on claims 1, 38, 63, and 95.

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Examiner further rejected claims under 35 U.S.C. 103 as follows:

- Claims 1-26, 28, 29, 31, 34-62, and 95-125 as being unpatentable over Lowery in view of Pearce, et al., *Strategic Management: Formulation, Implementation, and Control,* 4th edition, Richard D. Irwin, Inc., 1991, henceforth "Pearce".

15 - Claim 30 as being unpatentable over Lowery in view of N. Tatum, *Verity and Yahoo! Inc. Sign Distribution Agreement,* Verity, Inc., Sunnyvale, CA, April 12, 1999, henceforth "Tatum".

- Claims 32 and 33 as being unpatentable over Lowery in view of *Managepro 2.0 Reference Manual* (Managepro 2.0 for Windows, version 2.0, Reference Manual,

20   Avantos Performance Systems, Incorporated, 1993), henceforth "Managepro"

- Claims 63-94 are rejected as being unpatentable over Lowery in view of Pearce and Carter, "As program management Function evolves, Benefits Increase", *Water Engineering and Management,* Des Plaines, Vol. 142, issue 3, Mar. 1995.

Applicant rendered the foregoing rejections moot by replacing the claims then in the

25 application in the application with a new set of claims 126-186. In replacing the present claims, Applicant was by no means conceding the correctness of Examiner's rejections of the present claims, but rather merely taking advantage of his right to claims which set forth his invention in the most advantageous manner.

30 Applicant next received a restriction requirement in the application in which Examiner determined that the original claims were classified in class 705, subclass 7, while the new

claims 126-186 were classified in class 709, subclass 204. Examiner further determined that since Applicant had already received an action on the original claims, Applicant had constructively elected the invention of the original claims for prosecution on the merits. On the basis of that determination, Examiner withdrew new claims 126-186 from consideration as being directed to a non-elected invention.

Applicant responded to the restriction requirement by canceling claims 126-186 without prejudice and adding new claims 187-210 which overcame the restriction requirement and demonstrating why the new claims are patentable over the references. Examiner thereupon mailed a final Office action on 5/27/04 in which he rejected all of the remaining claims 187-210 on the basis of new references. Claims 187, 188, 189-193 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. patent 5,655,118, Heindel, et al., *Methods and apparatus for managing information on activities of an enterprise*, issued 8/5/97 (henceforth "Heindel"), claims 195-196 were rejected under 35 U.S.C. 103(a) as being obvious over the combination of Heindel with US. Patent 5,530,861, Diamant, et al., *Process enaction and tool integration via a task oriented paradigm*, issued 6/25/96, and claim 196 was rejected under 35 U.S.C. 103(a) as being obvious over the combination of Heindel with official notice. Claims 197-210 are addressed to substantially the same subject matter as claims 187-196 and are rejected for the same reasons. Applicants are filing an RCE with a submission under 37 C.F.R. 1.114 which traverses the rejections.

Traversal

The problem attacked by Heindel, Applicant, and many other so-called project management systems

The problem that motivates people to build interactive project management systems is the difficulty of understanding what is going on in an organization. The systems work by providing a model of the organization which users of the system may view and manipulate. The model is generally implemented using a relational database. One approach, used in systems such as the one described in the Lowery reference, is to provide a single model into which all kinds of organizations must be made to fit.

Organizations are typically hierarchically organized, and in Lowery, the model is a simple hierarchy. If an aspect of an organization does not fit the hierarchical model, it cannot be expressed in the system of Lowery. See in this regard the discussion at col. 2, line 30-col. 3, line 3 of Heindel.

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Heindel solves the problem of aspects of an organization that do not fit the hierarchical model by permitting the user to make any kind of model he or she wants of the organization. As shown in Heindel's FIG. 2, a model made using Heindel's system may be made up of strategic plans, projects, tasks, products, subprojects, or employees, and

10 any of these elements may be related to any other of these elements. As set forth at col. 6, lines 62-65 of Heindel,

> activity information data elements are stored in the database 200 using a non-hierarchical entity relationship model, as opposed to the hierarchical models employed by conventional project management systems.

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FIG. 5 gives an example of the kinds of models that can be made using the system of Heindel.

Heindel's system overcomes the limitations of the simple hierarchies of Lowery, but it

20 does so at a cost:

- Because the user can make any kind of model, it is left to the user to decide in every respect how the organization should be modeled. In effect, every user who employs Heindel to model an organization must "reinvent the wheel".

- Because the models made using Heindel's system may be completely arbitrary, they

25 will be difficult for users other than the creator of the model to understand.

- The generality of the system requires a high degree of complexity in the database itself and in the user interface and report generation systems.

The problem posed to the user by systems like the Lowery system on the one hand and Heindel's system on the other is this: Lowery's simple hierarchical model is easy to

30 understand and use, but is not powerful enough to model many commonly-occurring aspects of organizations. For example, it cannot easily deal with cross-hierarchical organizational functions such as HR or accounting or cross-hierarchical matters such as

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customer satisfaction. Heindel, on the other hand, can model anything, but each modeling problem must be approached from scratch and neither model makers nor model users cannot use experience gained with one model made using Heindel's system to understand another model made using Heindel's system.

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Applicant's "system for supporting management of a business by people involved therein" solves the problem posed by the limitations of Lowery and the complete generality of Heindel by providing a model which permits an organization to be viewed from two hierarchical perspectives. The first of these perspectives is a hierarchy of goals, which is similar to the hierarchy provided by a planning tool such as Lowery. The second of these is a hierarchy of domains, that is, elements of the business model which cut across the hierarchy of goals. An element of the goal hierarchy may also belong to a domain in the hierarchy of domains. FIG. 8 shows a typical domain hierarchy; as can be seen from the figure, the domains are business concerns which cut across many goals. The goal hierarchy is described at least at page 22, line 19-page 23, line 7 of Applicant's Specification and shown in FIGs. 13-15. FIG. 16, finally shows how the goals in the goal hierarchy may be sorted by the domain hierarchy, so that a user of the system can see the goals in the context of the domain hierarchy.

By adding the domain hierarchy to the goal hierarchy and permitting elements of the goal hierarchy to be related to elements of the domain hierarchy, Applicant's management support system permits models which provide perspectives lacking in the simple hierarchies provided by Lowery while avoiding the complexities of Heindel's generalized modeling system. Both the goal hierarchy and the domain hierarchy are intuitive in themselves, and the manner in which an element of a domain hierarchy may also relate to a domain in the domain hierarchy is also easy to understand. Further, since all models made using Applicant's modeling system have the same characteristics, model makers do not have to constantly "reinvent the wheel" and users who encounter new models made using Applicant's modeling system already have the knowledge needed to the models' basic structures.

Patentability of Applicant's claims over Heindel

Applicant's independent claim 187 clearly sets forth the characteristics of Applicant's modeling system which distinguish it from the simple hierarchical modeling system of Lowery and from the completely general modeling system of Heindel:

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> **187.** A system for supporting management of a business by persons involved therein,
> the system comprising:
> 10   a processor which has access to a representation of a model of the business, the model including representations of model entities, the representations of model entities belonging to a hierarchy and/or another hierarchy, and the representations of model entities providing access to information relating to the business and
>   an interface to the system for the persons, the interface
> 15   being provided by the processor and the interface permitting a person to perceive and modify the model entities and the hierarchies and to perceive and modify the information to which the model entities provide access.

The claim sets forth that the model "includes representations of model entities, the

20 representations of model entities belong to a hierarchy and/or another hierarchy" and that an interface to the system "permit[s] a person to perceive and modify the model entities and the hierarchies". As Examiner properly understands, the limitation that a representation of a model entity may belong to a hierarchy and/or another hierarchy of course immediately distinguishes Applicant's models from those of Lowery. The

25 limitation that the representation belongs to a hierarchy similarly distinguishes Applicant's models from those of Heindel, which has no such requirement.

It should be pointed out here that the generality of Heindel's modeling system permits it to be used to make any kind of model for an organization, including a simple hierarchical

30 model like those of Lowery and models of the kind set forth in Applicant's claim 187. That fact does not, however, mean that Heindel anticipates claim 187. What Applicants are claiming is a model with the specific properties set forth in claim 187, and the issue is whether there is anything in Heindel which discloses or suggests that a model made with Heindel's system should have the specific properties set forth in claim 187. With regard

35 to that issue, the answer is clear—a model organized in the fashion of the model shown in

Heindel's FIG. 5 cannot reasonably be considered to be hierarchical, and Heindel further expressly teaches away from the use of hierarchical models in the business context. See for example col. 6, lines 31-36:

> It is important to note that the activity information data elements 400 do not rely on hierarchical constructs where strategic plan (SP) elements relate to one or more product (PR) elements that relate to one or more project (P) elements that relate to one or more subproject (S) elements that relate to one or more task (T) elements that relate to one or more employee (E) elements.

There is thus nothing whatever in Heindel which discloses or implies what Applicants are claiming or that a system that employs models like those set forth in claim 187 could overcome most of the limitations of simple hierarchical systems like Lowery without the complexity of Heindel's system or of models like those shown in Heindel's FIG. 5.

Since that is the case, Heindel cannot serve as the basis for rejecting independent claim 187, or as Examiner well understands, independent claim 198. Because that is the case, claims 187-210 are all patentable over the reference. As regards the dependent claims, claims 188 and 199-200 are further patentable in their own rights because Heindel's failure to disclose the hierarchies of Applicant's model also means that it cannot disclose sorting or displaying model elements according to those hierarchies. There is further no specific disclosure at all in Heindel of any kind of user interface to his modeling system, so there is nothing corresponding to the limitations of claims 191-196 and 203-206. There is also nothing in Heindel that indicates that an entity in the model representation can be used to access additional related information, as set forth in claims 192-197 or claims 207-209. These claims are thus also patentable in their own rights over Heindel.

Examiner further rejects claims 194-196 under 37 C.F.R. 103. These rejections require of course that Heindel disclose all of the limitations of claim 187 and as already set forth, Heindel does not do that, and consequently, Heindel in combination with the other references cannot provide a basis for the rejection. In addition, Diamant does not disclose the "messages" and "discussions" of claims 195 and 196. The problem here is that the messages of Diamant are clearly messages sent by system components to other